Azure/ArcGIS Architecture Design: 2-Wk Assessment

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PROJECT TIMELINE & FEES

Azure/ArcGIS Architecture Design Assessment Summary

GCS is a Geospatial Information Technology Services Company delivering award-winning Microsoft Azure and Esri ArcGIS solutions. Our 2-week Architecture Design assessment sets the foundation for your organization to implement ArcGIS Location Intelligence technology in Microsoft Azure.

The first step in deploying ArcGIS Enterprise with Microsoft Azure is to design and plan your system architecture. This includes Azure resources and ArcGIS software considered in the design.

Azure/ArcGIS Architecture Design Assessment detailed action items:

- Identify the business goals, outputs, and processes
- Define the relevant use cases, epics, user stories
- Explain software deployment patterns and licensing model
- Gather non-functional requirements and service level agreements
- Map the relevant business requirements to the technology
- Design the conceptual architecture
- Design the business user needs architecture
- Design the application architecture
- Design the data architecture
- Design the approach to security
- Design the network architecture
- Design the platform architecture
- Design the storage, backup and security configuration
- Design integration and interoperability
- Determine capacity planning and performance requirement
- Build a phase/mitigation plan
- Consider environment isolation, DevOps, load balancing, content
- delivery, workload separation
- ArcGIS Server roles and extensions including Image, GeoAnalytics,
- GeoEvent, Business Analyst, and Notebook server.
- Azure Monthly Consumption Estimate
- Estimated Azure usage and monthly consumption estimate
- Scope of Work for Professional Services

GCS PROJECT TIMELINE & FEES

Fee – $5,000 (Estimated)

Fixed Timeline – Delivered within 2 weeks of start of engagement

Out-of-scope:

- Software application and RDBMS design
- Software development and programming

Week One Agenda:

- Meet to determine primary design requirements
- Agreement on requirements
- Start on preliminary design
- Review/feedback on preliminary design
- Agreement on preliminary design

Week Two Agenda:

- Start final design
- Review/feedback on final design
- Meeting to present final design

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ABOUT GCS

esri Partner Network Silver

Microsoft Partner
Silver Application Development

GCS delivers highly customized solutions that communicate meaningful geographic information and enhance workflow optimization. Our clients come to us from a broad spectrum of industry sectors with a common need: streamlined access to business insights distilled from complex data. Our technical expertise and collaborative client relationships allow us to design the powerful, elegant solutions needed to maximize productivity. Our systems are crafted at the convergence of cloud, analytics, and mobility to ensure access to answers everywhere, all the time.

Since 2002, we have delivered award-winning solutions for public and private organizations in diverse disciplines, including Natural Resources, Defense/Intelligence, Insurance, and all levels of Government.

We bring decades of technical expertise to the table in designing these customized geographic intelligence systems. For nearly 20 years, our award-winning team of experts has integrated and adapted best-of-class GIS platforms with cutting-edge technology to extract value from data, and opportunities from information. Dedicated teams work with clients for the life of a project to ensure the delivery of precise solutions for unique business challenges. Our ability to remain agile and responsive sets GCS apart from industry giants.

Clients choose GCS – and engage us again and again – because our solutions exceed their expectations, and because our team demonstrates unwavering commitment to harnessing innovation that works. In every project and for every client, we judge our success by the satisfaction of the people who use the solutions we craft for them.

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ABOUT GCS

With our solutions, clients will:

- Boost access to spatial data and tools by serving apps on the web or in mobile devices people regularly use
- Add geospatial context to previously unmapped data to produce new insights
- Optimize business processes and workflows
- Minimize data maintenance costs by establishing cloud databases
- Receive stable hosting and dynamically expanding user capacity
- Minimize cost by serving applications in the cloud
- Reduce expense and simply workflows through systems integrations
- Achieve insights and intelligence through advanced analytics
- Save time with intuitive, accessible public tools for non-GIS professionals

Solution Development Methodology

The GCS Solution Development Methodology (SDM) is a set of processes and document templates that guide our project management. This timetested method ensures our solutions meet consistent standards of quality, with many checks and balances, opportunities for client collaboration and feedback, quality assurance, and clearly defined milestones for delivering on any contract.

This process, defined by the Project Management Institute (PMI), ensures success through:

- Enhanced product quality
- Better management of risks
- Dependable, productive communication with customers
- Improved control over project schedule and scope

The GCS SDM includes six project phases. We plan each project around these phases, to maintain quality, though individual projects may not require every document or a lot of tasks in every phase. Our complete SDM, listing all document templates and typical tasks, is available upon request.

GCS CLIENT OVERVIEW

We provide solutions to organizations of all sizes in both the private and public sectors, including agencies at all levels of government and Native American tribes. Our diverse clientele spans a broad spectrum of industries and professions, such as Natural Resources, Forestry, Defense/Intelligence, Insurance, Health Care, Cyber-Security and Energy. For every challenge, we create a fully customized solution.

County Government

- Boulder County, CO
- Missoula County, MT
- Lewis and Clark County, MT
- Gallatin County, MT
- Flathead County, MT
- Lake County, MT
- Clearwater County, ID

Local & State

- Colorado State Land Board
- Clark Fork Coalition (River Health NPO)
- Montana Information Technology Services Division
- Montana Department of Natural Resources and Conservation
- University of Montana
- Montana Historical Society
- Municipalities including:
  - City of Billings
  - City of Columbia Falls
  - City of Missoula
- Montana Governor's Office of Economic Development
- Montana Department of Health and Human Services
- Montana Department of Fish, Wildlife, and Parks
- Montana Dept. Transportation

GCS CLIENT OVERVIEW

While many of our clients are in the Rocky Mountain West and Pacific Northwest regions, we support clients as far away as Vienna, Austria.

Federal Government

- U.S. Army - NVESD
- U.S. Marine Corps - 1 - MEF
- U.S. Navy - NUWC - NAVSEA
- USDA Foreign Agricultural Service
- U.S Fish and Wildlife Service
- DOE - Idaho National Laboratory
- U.S. Geological Survey
- Army Corps of Engineers
- U.S. Forest Service - Fire Sciences Lab

Tribal

- Kalispel Tribe of Indians
- Fort Peck Tribes
- Fort Belknap Reservation
- Nooksack Tribe

United Nations

- International Atomic Energy Agency

Private Sector

- Esri
- The SI Organization
- OmniTRAX
- PIAL
- GeoNav Group International
- Firewise Communities Program
- CACI Inc.
- Alion Science & Technology Inc.
- Economic Development Lethbridge, Canada
- Institute for Health Metrics and Evaluation
- Sarnoff Inc.
- GeoEye
- Weyerhauser
- Idaho Survey and Rating Bureau
- Oxford University Press
- Missouri Botanical Garden
- Immersive Media Inc.
- National Fire Protection Association
- Washington Survey and Rating Bureau
- Agren

GCS CLIENT PROFILES

AGREN

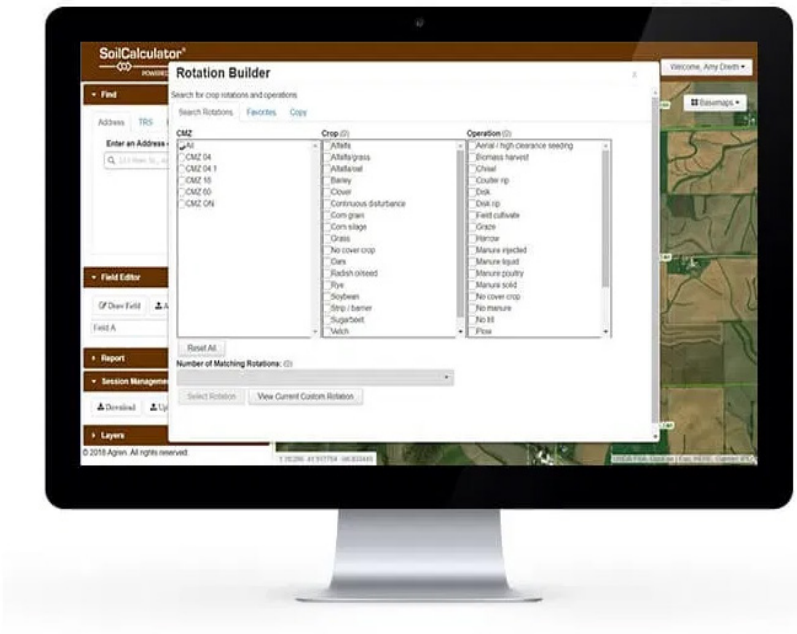
Problem

In 2016, Agren was looking to develop a web interface which would enable users to accomplish in minutes what farmers have traditionally waited weeks, to months, for from local public agencies. They wanted to empower farmers and land managers to make profitable decisions while simultaneously enhancing agricultural productivity and supporting sustainability.

Solution

Working closely with Agren, GCS delivered, from the ground up, Agren's precision conservation suite of geospatial based web tools: WaterwayBuilder, PondBuilder, BasinBuilder, and WetlandBuilder. In addition, GCS supplemented Agren's internal agile development team to support operations and create new feature enhancements to SoilCalculator and BufferBuilder solutions.

Agren SoilCalculator allows service providers to plug in various crop rotations, tillage systems, and conservation practices and view the resulting erosion predictions for up to three scenarios. Color-coded maps, similar to a GIS yield map, pinpoint areas of high erosion. Growers can easily evaluate alternatives side by side to maximize profits, conserve soil, preserve yields, and reduce nutrient inputs.



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CLIENT PROFILES

WEYERHAEUSER

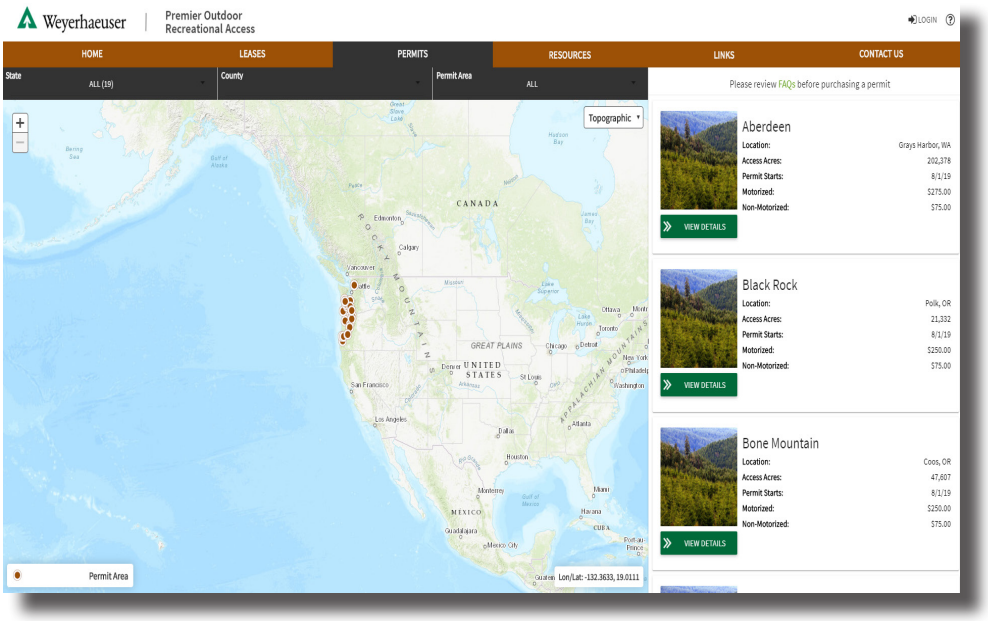
Problem

Weyerhaeuser needed a simple, user-friendly, easily accessible way to market and manage leasable land for people looking to hunt, camp, fish, or engage in other recreational activities. They wanted a publicy-accessible web portal which would show areas on a map, display the type of forests available, and also display any accessible amenities available on the property.

Solution

Weyerhaeuser contracted GCS to create Recreation Lease Management (RLM), a publicly accessible web portal that allowed the company to offer their land for lease and keep track of who was leasing it at any given time. GCS developed an interactive mapping portal which displayed all relevant information about the properties, as well as pricing and availability. This streamlined system helped Weyerhaeuser cut down on complicated, time-consuming tasks related to the leasing process, and made it easier for the public to find what they were looking for.

Weyerhaeuser



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CLIENT PROFILES

Montana DNRC

Problem

In 2015, the Montana DNRC was searching for a new timber cruising platform that would replace a legacy system that was no longer supported by their IT department. The Esri ArcGIS Online/Collector platform seemed to be a great fit, but they needed a contractor to customize this off-the-shelf software to enable them to design cruises and allocate plots via a web interface, collect tree data in Collector, and compile/report the results.

Solution

The DNRC partnered with GCS, and together we developed a project called NextGen Cruiser. NextGen Cruiser entailed creating several hosted geoprocessing tools which included complex formulas and code. GCS kept in frequent contact with the DNRC to test builds of the application; and in its completed form, even their most tech-shy and skeptical foresters easily adapted to the new platform. It quickly became their most reliable GIS/Web app. The DNRC used the platform on hundreds of timber cruise projects without any issues.

"We found GCS to be: easy to communicate with, conscientious and mindful of budget & timelines, willing to provide advice when they discovered a better/more efficient way of accomplishing a task, and very supportive after the release to fix bugs."

- Mark Slaten, Forest Informatics Analyst, Montana DNRC